ABSTRACT

A method and apparatus for intelligently determining which traffic streams to offload efficiently. A metric value is associated with a Security Association (SA) for each network traffic stream coupled to an electronic system. The metric is used to determine which of multiple methods to perform cryptography operations should be used to handle which streams. The metric is modified based on network traffic, and increased when the SA is cached. The metric of all SAs is periodically decreased. In one embodiment, a network interface driver determines which SAs should be cached on a network interface card and handled using Inline Receive, and which SAs should not be cached and handled using Secondary Use. Cached SAs are replaced by non-cached SAs only if the metric value of a non-cached SA is greater than the metric value of a cached SA by at least a predetermined amount representing the cost of cache replacement.